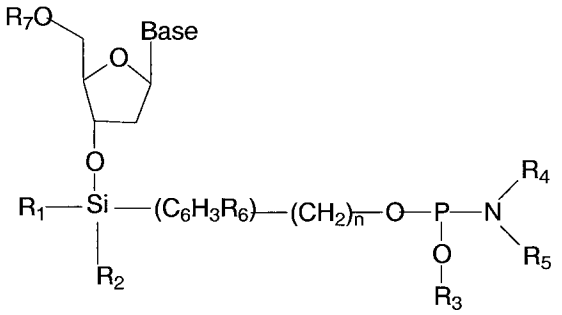
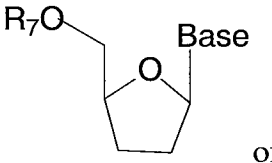
AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A compound represented by the following formula:

(I)



wherein



of formula I represents a 2'-deoxyribonucleoside or its N-protected derivative, the substituent -O-(R_1)Si(R_2)-($C_6H_3R_6$)-(CH_2)$_n$-O-P(OR_3)N(R_4)(R_5) is attached at the 3' position of the sugar moiety of the nucleoside substituent; each of R_1, R_2, R_4 and R_5 is an alkyl or optionally substituted aryl group, wherein the optionally substituted aryl group has a substituent selected from the group consisting of C_{1-5} alkyl, nitro, cyano, halo and methoxyl; R_3 is a protecting group; R_6 substituent of the benzene ring –($C_6H_3R_6$)- is selected from the group consisting of H, C_{1-4} alkyl, halo, nitro, cyano and methoxyl; R_7 is H or 4,4'-dimethoxytrityl; and n is an integer of from 1 to 5.

2. (Previously Presented) The compound according to Claim 1 wherein R_1 and R_2 are independently a C_{1-5} alkyl.

3. (Previously Presented) The compound according to Claim 1 wherein R_1 and R_2 are independently substituted aryl.

4. (Previously Presented) The compound according to any one of Claims 1 to 3 wherein the protecting group R_3 is 2-cyanoethyl, 4-nitrophenylethyl, N-(trifluoroacetyl)aminobutyl, or 4-[N-methyl-N-(2,2,2-trifluoroacetyl)amino]butyl.

5. (Previously Presented) The compound according to Claim 4 wherein the protecting group R_3 is 2-cyanoethyl.

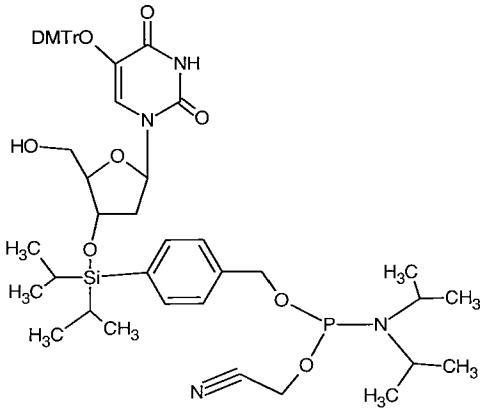
6. (Previously Presented) The compound according to Claim 1 wherein each of R_4 and R_5 is independently C_{1-4} alkyl, benzyl, phenyl, or naphthyl.

7. (Previously Presented) The compound according to Claim 1 wherein each of R_4 and R_5 is independently isopropyl.

8. (Cancelled)

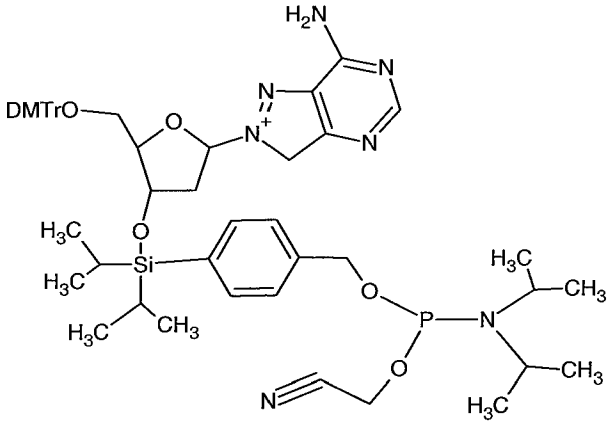
9. (Previously Presented) The compound according to Claim 1 wherein R_6 is selected from the group consisting of C_{1-4} alkyl, halo, nitro, cyano and methoxy.

10. (Previously Presented) A compound having the structure



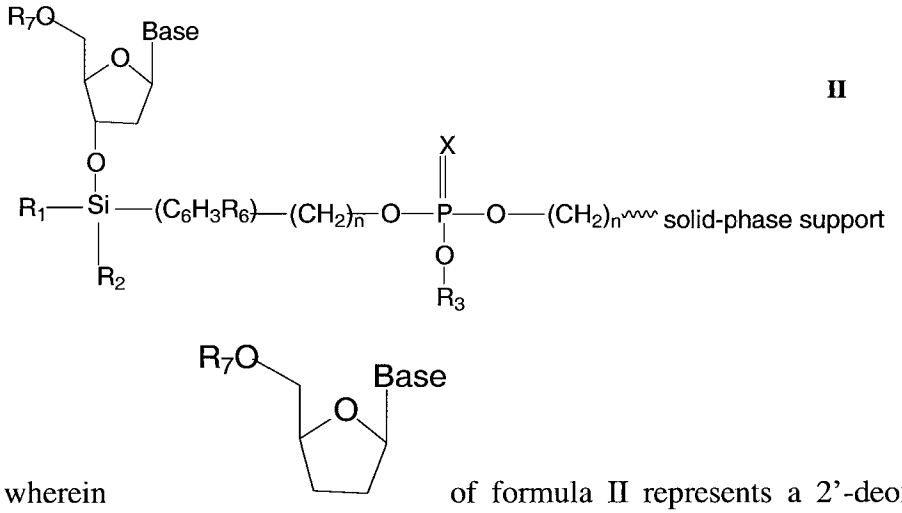
wherein DMTr is 4,4'-dimethoxytrityl.

11. (Previously Presented) A compound having the structure



wherein DMTr is 4,4'-dimethoxytrityl.

12. (Previously Presented) A solid-phase support having a 3'-end nucleoside unit introduced thereon as represented by formula II:



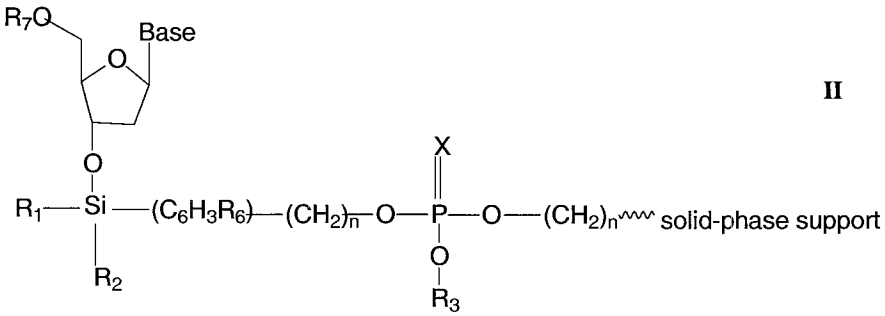
II

wherein of formula II represents a 2'-deoxyribonucleoside or its N-protected derivative, the substituent -O-(R_1)Si(R_2)-($C_6H_3R_6$)-(CH_2)$_n$-O-P(OR_3)XO)-(CH_2)$_n$ is attached at the 3' position of the sugar moiety of the nucleoside substituent; each of R_1 and R_2 is an alkyl or optionally substituted aryl group, wherein the optionally substituted aryl group has a substituent selected from the group consisting of C_{1-4} alkyl, nitro, cyano, halo and methoxyl; R_3 is a protecting group; X is S or O; R_7 is H or 4,4'-dimethoxytrityl; each n is an integer of from 1 to 5; and the solid-phase support has hydroxyl groups on its surface.

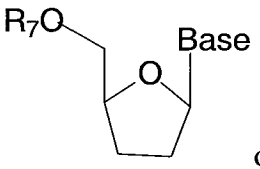
13. (Previously Presented) The solid-phase support according to Claim 12 having the 3'-end nucleoside units present at a ratio of 20-30 μmol/g.

14. (Cancelled)

15. (**Currently Amended**) A method for the synthesis of a nucleic acid oligomer comprising synthesizing a nucleic acid oligomer on a solid-phase support having a 3'-end nucleoside unit introduced thereon as represented by formula II:



II

wherein 

of formula II represents a 2'-deoxyribonucleoside or its N-protected derivative, the substituent -O-(R_1)Si(R_2)-($C_6H_3R_6$)-(CH_2)$_n$-O-P(OR_3)XO)-(CH_2)$_n$ is attached at the 3' position of the sugar moiety of the nucleoside substituent; each of R_1 and R_2 is an alkyl or optionally substituted aryl group, wherein the optionally substituted aryl group has a substituent selected from the group consisting of C_{1-4} alkyl, nitro, cyano, halo and methoxyl; R_3 is a protecting group; X is S or O; R_7 is 4,4'-dimethoxytrityl; each n is an integer of from 1 to 5; and the solid-phase support has hydroxyl groups on its surface; and wherein the synthesizing step comprises:

removing the 4,4'-dimethoxytrityl group by treating the solid phase support with trichloroacetic acid,

activating a nucleoside phosphoramidite with an activating agent comprising an alcohol-type compound, or a mixture of the alcohol-type compound and an acid catalyst,

bringing the activated nucleoside phosphoramidite into contact with the solid-phase support to form a linkage and produce an oligonucleotide precursor,

activating a second nucleoside phosphoramidite with the activating agent ~~HO^{tf}Bt~~,

bringing the second activated nucleoside phosphoramidite into contact with the oligonucleotide precursor to form another linkage and elongating the oligonucleotide precursor, optionally repeating this step, to produce an oligomer attached to the solid-phase support,

oxidizing the oligomer attached to the solid-phase support with iodine, water and pyridine,

removing cyanoethyl groups from the oligomer attached to the solid-phase support using 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU), and

treating the oligomer attached to the solid-phase support with anhydrous tetrahydrofuran (THF), tetra-n-butylammonium fluoride (TBAF), and acetic acid to cleave the oligomer from the solid-phase support.

16. (Cancelled)

17. (Previously Presented) The solid-phase support of claim 12, wherein the solid-phase support is a highly cross-linked polystyrene (HCP).

18. (Previously Presented) The method of claim 15, wherein the solid-phase support is a highly cross-linked polystyrene (HCP).

19. (Previously Presented) The method of claim 15, wherein the activating agent is 6-trifluoromethyl N-hydroxybenzotriazol (HO^{tf}Bt).